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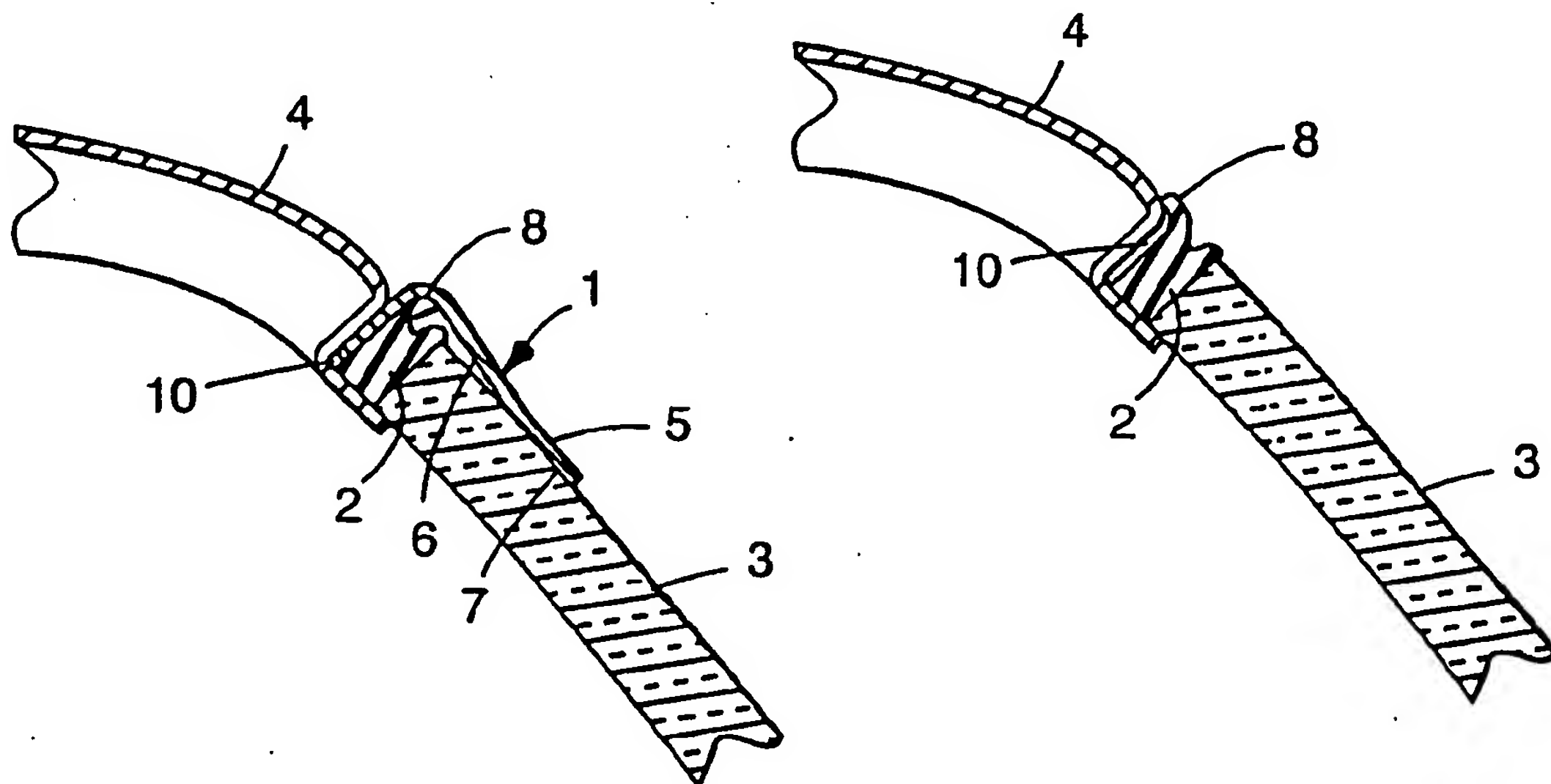
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(54) Title: ADHESIVE TAPE FOR PROTECTING OF RUBBER SEALING GASKETS



## (57) Abstract

To protect and tape rubber sealing gaskets used to mount vehicle windshields during repainting of vehicle bodies, a protective adhesive tape of sufficient strength is pushed into a hollow space formed by the lip extending away from the windshield of the rubber sealing gasket and the vehicle body. Then the protective adhesive tape with this lip is bent towards the windshield and adhered to the windshield using the pressure sensitive adhesive edge layer.

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## ADHESIVE TAPE FOR PROTECTING OF RUBBER SEALING GASKETS

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Technical Field

The invention concerns a process as well as a protective adhesive tape for covering and taping of flexible rubber sealing gaskets such as those used to mount vehicle windshields during repainting of vehicle bodies.

Background

For vehicles, where there is no hollow space between the rubber sealing gasket and the body, there is the possibility to introduce a cord under the lip of the rubber gasket which seals to the body. This way the lip is spaced away from the body, and it becomes possible to exactly cover this lip, so that the body can be repainted cleanly in the region of the lip seal.

But for vehicles, where there is a hollow space between the rubber sealing gasket and the body, it is not practical to use the cord, since it easily can slide into the hollow space. If this happens during painting, and the lip at that location contacts the vehicle body, it becomes impossible to paint cleanly.

It is also possible to insert the lip of the gasket into the hollow space between the rubber sealing gasket and the car body. But it is not very feasible to tape the rubber sealing gasket in the region of the inserted lip. In addition it becomes rather difficult to pull out the inserted lip after finished painting. To accomplish this, one needs a thin pointed tool, which in some instances can even damage the rubber sealing gasket. Also this operation is very time consuming.

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The object of this invention, is to develop a process as well as a pressure sensitive protective tape, which makes it possible to keep the rubber sealing gasket and its lip away from the car body during repainting, where the rubber sealing gasket is simultaneously covered and where little time is used for applying and removing the tape to directly recondition the lip to its original condition.

#### 10 Summary of the Present Invention

This task is, according to the invention, accomplished by a protective adhesive tape for masking flexible sealing gaskets of the type having a leg portion that overlies an adjacent body panel, said  
15 protective adhesive tape comprising along its total width at least on the side which is laid open during application has a slightly textured smooth surface structure and has on the opposite side a pressure sensitive adhesive edge layer and a non-adhesive edge  
20 portion for insertion under the leg portion of the sealing gasket.

In accordance with another aspect of the present invention, a process for masking flexible sealing gaskets of the type having a leg portion that overlies  
25 an adjacent body panel is described. The process comprising the steps of: providing a protective adhesive tape having on one major surface thereof a pressure sensitive adhesive edge layer and a non-adhesive edge portion; inserting the non-adhesive edge  
30 portion of the protective adhesive tape between the lip of the flexible sealing gasket rubber sealing gasket and the body panel, then folding the protective adhesive tape with the lip away from the body panel, and adhering the adhesive edge layer to a further  
35 body panel located on the other side of the sealing gasket from the leg portion.

By the special design of the protective adhesive

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tape, it is possible to make covering of vehicle windshields very simple. The pressure sensitive adhesive layer positioned along the protective tape makes it possible to fasten it along the windshield without the need for a second adhesive tape. After repainting, the protective tape with its pressure sensitive edge is removed by simply pulling it off the windshield, whereby the protective tape is simply pulled out of the hollow space between the car body and the rubber sealing gasket. This way the lip of the rubber sealing gasket will again contact the body of the vehicle.

#### Brief Description of the Drawings

One example of the invention is shown in the drawings wherein:

Figure 1 shows a part of the protective tape in perspective;

Figure 2 shows a part of the vehicle with the protective tape mounted;

Figure 3 is a cross-section along line III-III in Figure 2; and

Figure 4 is a cross-section according to line III-III in Figure 3 with the lip of the rubber sealing gasket contacting the vehicle body after removal of the protective tape.

#### Detailed Description

In accordance with the present invention, a protective adhesive tape 1 is provided for covering and taping of flexible rubber sealing gaskets 2 that are used between adjacent vehicle body panels of metal, glass, etc., such as those used to mount vehicle windshield, during repainting of vehicle bodies 4. The tape 1 has along its total width B, on at least the one major surface 5 that is laid free during application, a slightly textured, but in itself

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smooth surface structure. On the opposite major surface 6, to this slightly textured smooth surface, a pressure sensitive adhesive edge strip 7 is present. Th pressur sensitive adhesive edge strip need not be  
5 provided on the tape edge, as long as a non-adhesive edge portion is also provided at another tape side edge.

The protective adhesive tape 1 is preferably about 0.5 mm thick, to provide sufficient strengthso  
10 that a lip 8 of the rubber sealing gasket 2 can not push the protective adhesive tape away.

The slightly textured smooth surface structure of the free side 5 of the protective adhesive tape 1 is in a preferred form coated with silicones, so that for  
15 one, the paint does not stick to the protective adhesive tape 1 during repainting, so that the new paint coating is not damaged during removal of the tape from the body 4, and further so that, when the protective adhesive tape 1 is supplied in rolls, the  
20 adhesively coated edge strip 7 releases from the slightly textured, smooth surface of the free side 5.

For tailored application of the protective adhesive tape 1 to a windshield 3 of a specific type vehicle, it is preferable to provide a removable  
25 protective layer (not shown) covering the pressure sensitive adhesive edge strip 7.

The adhesive layer of the pressure sensitive edge strip 7 is designed to be heat stable, so that substantially no residues are left on the windshield 3  
30 after treatment of the vehicle 9 in a drying chamber. Such would be time consuming and difficult to remove. On the other hand the adhesive layer maintains its adhesion during the heat exposure of the drying chamber, so that the protective adhesive tape does not  
35 just flex back upon the freshly painted vehicle body.

After this description of the design of the prot ctive adhesive tape 1, the application of same is

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now described.

5       The non-adhesive edge of the protective adhesive  
tape 1 is inserted between the lip 8 of the flexible  
sealing gasket 2 and the body panel 4 and preferably  
10 into the hollow space 10 that is formed by the lip 8  
of the rubber sealing gasket 2 which extends away from  
the windshield 3 and a flange portion of the vehicle  
body 4. Then, the protective adhesive tape 1 is  
folded along the gasket lip 8 towards the windshield 3  
and adhered to the windshield 3 by way of its pressure  
sensitive edge strip 7. The protective adhesive tape  
10 holds the gasket lip 8 away from the vehicle body  
4, as shown in Figure 3.

15       After repainting and the following treatment in  
the drying chamber, the adhesive edge strip 7 is  
pulled from the windshield 3, and the protective  
adhesive tape 1 is pulled out of the hollow space 10.  
This way the lip 8 of the rubber sealing gasket 2 will  
again seal against the body 4 of the vehicle 9.

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## Claims

1. A process for masking flexible sealing gaskets of the type having a leg portion that overlies an adjacent body panel said process comprising the steps of: providing a protective adhesive tape having on one major surface thereof a pressure sensitive adhesive edge layer and a non-adhesive edge portion; inserting the non-adhesive edge portion of the protective adhesive tape between the lip of the flexible sealing gasket rubber sealing gasket and the body panel, then folding the protective adhesive tape with the lip away from the body panel, and adhering the adhesive edge layer to a further body panel located on the other side of the sealing gasket form the leg portion.

2. A protective adhesive tape for masking flexible sealing gaskets of the type having a leg portion that overlies an adjacent body panel, said protective adhesive tape (1) comprising along its total width (B) at least on the side which is laid open during application (5) has a slightly textured smooth surface structure and has on the opposite side (6) a pressure sensitive adhesive edge layer (7) and a non-adhesive edge portion for insertion under the leg portion of the sealing gasket.

3. A protective adhesive tape according to claim 2, characterized in that the slightly textured smooth surface structure on the side that is laid open (5) is coated with silicone.

4. A protective adhesive tape according to claim 2 and 3, characterized in that the protective adhesive tape (1) has a thickness of 0.5 mm.

5. A protective adhesive tape according to



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claim 2 to 4, characterized in that the protective adhesive tape is in form of a roll.

5        6.    A protective adhesive tape according to claim 2 to 4, characterized in that the protective adhesive tape is shaped fitted to be applied to the specific windshield of a vehicle type.

10       7.    A protective adhesive tape according to claim 2, characterized in that the pressure sensitive adhesive edge layer (7) is applied with a pull-off protective layer.

15       8.    A protective adhesive tape according to claim 2, characterized in that the adhesive layer of the pressure sensitive adhesive edge layer (7) is made to be heat resistant.

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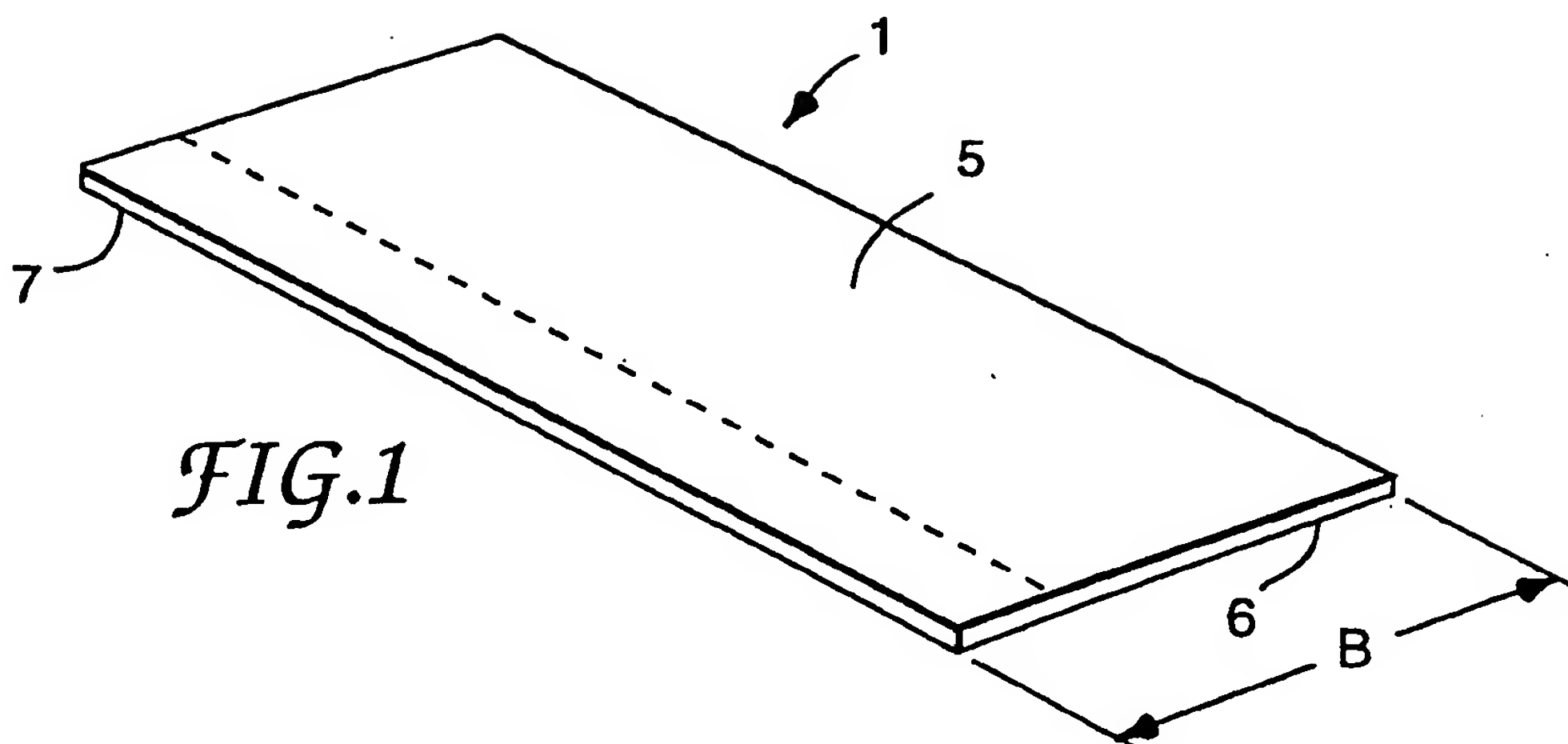


FIG. 1

FIG. 4

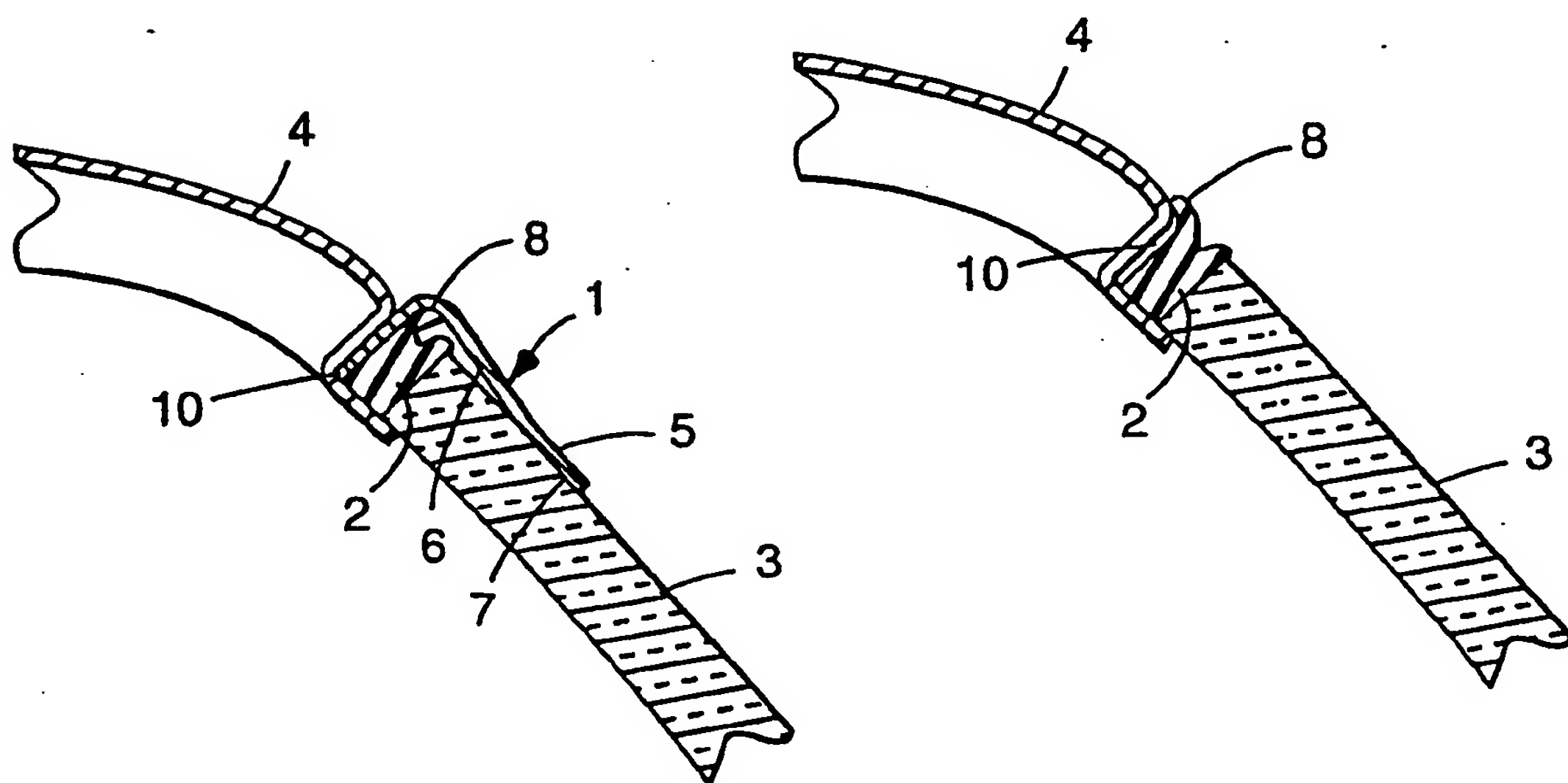
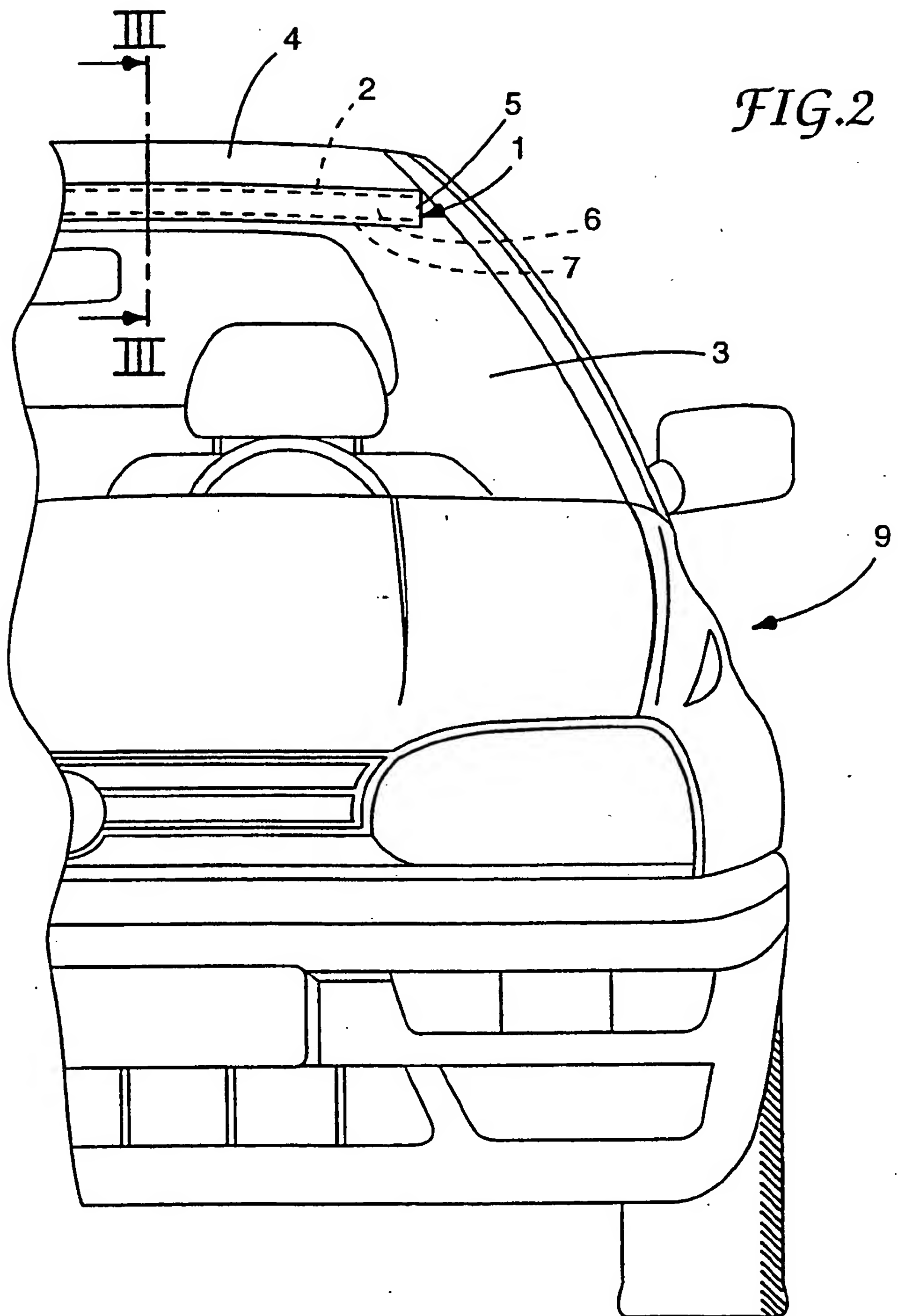


FIG. 3



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 93/10862

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 5 C09J7/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 5 C09J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE,U,91 06 206 (RIBIC) 22 August 1991 see the whole document ---	1-8
Y	DATABASE WPI Section Ch, Week 8836, Derwent Publications Ltd., London, GB; Class G03, AN 88-253571 'Tape for attaching sheet to non-painted portion' & JP,A,63 183 978 (TOMAE M) 29 July 1988 see abstract -----	1-8

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Date of the actual completion of the international search

3 March 1994

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. .onal Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE-U-9106206	11-07-91	AU-A- 1689192	30-12-92
		DE-A- 4123964	19-11-92
		WO-A- 9220461	26-11-92
		EP-A- 0518403	16-12-92
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